

Applicant: Rode
Docket No.: 0545.024



Serial Number 10/054,253
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Rode
Serial No.: 10/054,253
Filed: January 22, 2002
Title: ADJUSTABLE DISC SPRING SYSTEMS AND METHODS

Group Art Unit: 3683
Confirmation No.: 3708
Examiner: Xuan Lan T. Nguyen

CERTIFICATE OF MAILING

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REPLY TO EXAMINER'S ANSWER BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Dear Sir:

This is reply under 37 C.F.R. § 1.193 from an Examiner's Answer dated June 30, 2005, and mailed on July 7, 2005. Therefore, this reply brief is timely filed within two months, i.e., by September 7, 2005.

ARGUMENT

This paper relates to the Response to Arguments section of the Examiner's Answer July 30, 2005, which is incorporated herein by references. The points raised in the Examiner's Answer are addressed below.

§ 102 Rejections:

The Answer continues to allege that the Teeri reference anticipates claims 16, 24, 25 and 28. Also, the Examiner's Answer argues that the binding rings in Teeri are adjustable spacers made of metal and that an inherent property of metal is the plastic compressibility thereof. Further, the Examiner's Answer argues that Teeri discloses an adjustable spacer. In particular, the Examiner argues that the alleged adjustable spacer could be made of metal, rubber, or rubber with a reinforced metal layer and that the rubber is adjustable in that such rubber allows Belleville springs to move laterally or axially. Metal is alleged to be adjustable since the material can be bent and shaped to any desired configuration.

Applicant respectfully disagrees that the binding rings disclosed in Teeri are adjustable spacers. Instead, the binding rings are described in this reference as being elastic (column 2, lines 57-60) and depicted as being rigid (FIGS. 4 and 6), but they are not described as being adjustable nor as being spacers. In contrast, an adjustable spacer is recited in claim 16 as being plastically compressible in a substantially axial direction relative to a plurality of beveled disc springs. Such adjustable spacers are described on page 5 of the specification of the present application as being of the type disclosed in Rode, U.S. Patent No. 4,067,585 or as otherwise being capable of accepting an axial load and being compressible in an axial direction under a certain load. The adjustable spacers disclosed in Rode create a predetermined load on a part, which it is desired to maintain under a predetermined constant load. It is respectfully submitted that the term "adjustable spacer" would be understood by one skilled in the art in view of the specification to be one which is compressible in an axial direction under a load to provide adjustment thereto. In contrast, the disc spring pillar assembly disclosed in Teeri includes binding rings having Belleville disc springs attached thereto, but there is no disclosure of the binding rings being adjustable nor being plastically compressible in an axial direction. Instead,

the binding rings are described as being elastic and depicted as being rigid, but there is no description of adjustability nor compressibility thereof in a substantially axial direction. Thus, the binding rings in Teeri could not be considered to be adjustable spacers.

Further, relative to the allegation in the Answer that metal is inherently plastically deformable, there is no indication in the reference that the binding rings disclosed therein would be plastically compressible in a substantially axial direction relative to a plurality of beveled disc springs as is recited in claim 16 of the present application. Anticipation by inherent disclosure requires that the consequence of following a reference always inherently produces or results in a claimed invention. *W.L. Gore Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303, 314 (Fed. Cir. 1993). Further, anticipation by inherency requires that prior art necessarily includes an alleged unstated limitation. *Transclean Corp. v. Bridgewood Services, Inc.*, 62 USPQ2d 1865 (Fed. Cir. 2002). Even if the binding rings may be made of metal, and an inherent property of metal is its plastic compressibility, there is no support for the contention in the Office Action that the Teeri binding rings will plastically compress in an axial direction, and certainly no support that it will always compress in an axial direction. The alleged plastic compressibility is not discussed in Teeri and thus there is no reason to believe that such plastic compressibility would be in a substantially axial direction relative to a plurality of beveled disc springs. Instead such alleged compressibility could cause the binding rings to be plastically compressed in any number of directions off-set from a substantially axial direction relative to such a plurality of beveled disc springs. The alleged inherent deformability is therefore not inherent in the cited reference. Thus, because all the features (e.g., an adjustable spacer plastically compressible in a substantially axial direction relative to a plurality of beveled disc springs) of claim 16 of the present application are not identically disclosed, explicitly or inherently, in Teeri, this claim cannot be anticipated thereby. Accordingly, claim 16 and the claims depending therefrom are believed to be allowable.

§ 103 Rejections:

The Examiner's Answer continues to allege that claims 1-6, 8, 9, 13, 14, and 29-32 are obvious over Teeri in view of Rode (U.S. Patent No. 4,067,585). In particular, pages 4-5 allege that Teeri discloses the elements of claim 1 of the present application except for the disclosure of

plastic compressibility to allow axial adjustment in response to a force placed on a spacer, which is alleged to be taught by Rode. Further, page 7 of the Examiner's Answer alleges that Teeri teaches the desirability in column 1, lines 41-46 of compressed binding rings. Page 8 of the Examiner's Answer alleges that the height of the binding rings (alleged to be spacers) is changed to help produce different spring constants for different spring assemblies. Page 8 also states that Teeri adjusts the height of the binding rings differently than Appellant adjusts the height of Appellant's spacer, i.e., by changing the height of binding ring used. However, the desire for adjustability is alleged to be clearly stated and shown in the figures and Rode is alleged to be merely relied on for a different type of spacer. The Answer also poses the question of why a person of ordinary skill in the art would not use an old and well known spacer of Rode in Teeri as a convenient means to adjust the spacer (i.e., binding rings). Further, the Examiner's Answer poses the question of what would prevent one of ordinary skill in the art of springs to not take advantage of the spacer of Rode to further improve the spring assembly by expanding the range of loads the spring assembly may accommodate. Both of the Examiner's questions are irrelevant and improper because they do not reflect the proper legal standard for a § 103 rejection.

As noted in the Appeal Brief, the spring pillar system disclosed in Teeri is characterized in that it works as both a pressure spring and a tension spring as described in column 1, lines 59-63. In contrast, Rode discloses a spacer which is deformed to create a predetermined load on a part which it is desired to maintain under a predetermined constant load as described, for example, in the Abstract. In particular, Rode teaches a predetermined constant load being applied while Teeri discloses a spring designed for use with pressure and tension along with receiving a dynamic load. Simply put, Rode's spacer and Teeri's spring solve different problems and perform different functions. Teeri's springs provide increased elastic deflection with an increase in load, as does a conventional spring. Rode, as shown in FIG. 3 therein, provides increased deflection with a constant load, as does an adjustable spacer. There is no disclosure in Teeri of the desirability of plastically compressing the spring pillars nor maintaining a constant load on the spring pillar system disclosed therein. Instead, the spring pillar system disclosed in Teeri is configured to receive a dynamic load and not a predetermined constant load as in Rode. Thus, there would be no reason to combine these references since they solve different problems and teach away from one another.

Further, as noted in the Appeal Brief, even if the spacer of Rode was incorporated into the pillar system of Teeri, there is no reason in view of Teeri and/or Rode to believe the resulting device would work as a pressure spring and tension spring in a dynamic environment as required by Teeri. Instead, as noted above, the Rode spacer is intended to be utilized under a predetermined constant load. The Examiner's Answer alleges on page 9 that the dynamic load capacity of the spring assembly is mainly provided by the Bellville spring. Further, it is alleged that combining the Rode spacer into the Teeri device would not hinder any inherent dynamic load capacity of the springs, and it would help expand the range of loads that the Teeri spring assembly can accommodate. The Answer does not provide any support for this assertion, and as noted, there is no reason to believe that the Rode spacer would satisfy the requirements of the spring pillars disclosed in Teeri. Regardless of whether the dynamic load capacity is provided by the Bellville springs, or the spring pillars, it is clear that the spring pillar system in Teeri is exposed to a dynamic environment and may be loaded in two directions. There is no indication in Rode, nor any assertion by the Examiner, which would provide any support or basis for utilizing the Rode spacer in this manner. Thus, a combination of the cited references would make the Teeri device unsatisfactory for its intended purpose and would further not result in the subject matter recited in claim 16.

Relative to the allegation in the Answer that Teeri teaches adjusting the height of the alleged spacer disclosed therein (i.e., the binding rings), the "adjusting" alleged in Teeri is accomplished merely by substituting binding rings of different lengths. Such utilization of binding rings of different lengths is not equivalent to adjusting a spacer by plastically compressing it in a substantially axial direction relative to a plurality of beveled disc springs. Such adjustment is accomplished *in situ* in contrast to the introduction of different sized binding rings as alleged in the Answer. The means of adjustment therefore teach away from one another. One of ordinary skill of art in view of Teeri would not look to Rode to adjust the binding rings of Teeri, because as noted above, they operate in different environments. The Rode spacer is utilized under a predetermined constant load, while Teeri discloses a binding ring system utilized as a pressure spring and a tension spring in a dynamic environment. Thus, one of ordinary skill in the art would not look to Rode to adjust the binding ring system in Teeri. Further, the substitution of a component part (e.g., binding ring) of the device in Teeri with a different sized

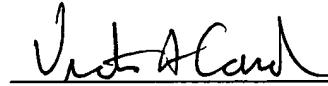
part does not make the original device adjustable. The scenario outlined by the Examiner amounts to the selection of the proper size binding rings for a particular task and not the adjustability of a binding ring system once it has been selected. In contrast, the adjustable spacer of the present application is adjusted after a proper size has been selected and installed in its proper position. Thus, the Teeri device is not adjustable, and the alleged motivation for combining references is mere impermissible hindsight. Accordingly, applicant respectfully disagrees with the statement in the Answer that one of ordinary skill in the art would look to the spacer of Rode to adjust the height of the binding rings in Teeri.

Therefore, claim 1 is believed to be allowable along with the dependent claims which are believed to be allowable for the same reasons and for their own additional features.

CONCLUSION

In conclusion, Appellant submits that Teeri fails to disclose at least one element of claim 16 of the present application and thus does not anticipate claims 16, 24, 25 and 28. Further, it is respectfully submitted that Teeri, in view of Rode, teaches away from the subject matter recited in these claims and further that such a combination would make Teeri and Rode unsatisfactory for their intended purposes. Further, such a combination is impermissible hindsight. Thus, Teeri in view of Rode does not make obvious claims 1-6, 8, 9, 13, 14, and 29-32. Accordingly, it is respectfully submitted that the cited references cannot anticipate, nor make obvious, the claims of the present application. Therefore, Appellant submits that the Final Office Action should be reversed in all respects.

Respectfully submitted,



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